UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8, MONTANA OFFICE
FEDERAL BUILDING, 10 West 15th Street, Suite 3200
HELENA, MONTANA 59626

Ref: 8MO

September 14, 2009

Bitterroot National Forest
Travel Management Planning Team
Stevensville Ranger District
Stevensville, Montana 59870

Re: Bitterroot National Forest Travel Management Plan Draft Environmental Impact Statement (CEQ #20090267)

Dear Planning Team:

In accordance with Section 102(2)(C) of the National Environmental Policy Act (NEPA), 42 U.S.C. § 4332(2)(C), Section 309 of the Clean Air Act, 42 U.S.C. § 7609, and the Council on Environmental Quality (CEQ) regulations, 40 CFR Parts 1500-1508, the United States Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the Bitterroot National Forest Travel Management Plan, and offers the following comments.

We appreciate the Bitterroot National Forest's effort in preparing a Travel Management Plan and DEIS. The EPA supports improved management of motorized travel and recreational uses to reduce environmental impacts of such uses on National Forests. Public recreational demand and access has increased significantly in recent years, and use of newer motorized off-highway vehicles (4x4's, trail bikes, ATVs) in sensitive areas, including on steep slopes, fragile soils, wet meadows, and around water bodies has caused soil erosion and adverse effects to water quality, aquatic habitat and fisheries. Also, the newer vehicles can access areas much further into the Forest than they could historically, forcing wildlife onto smaller and smaller patches of habitat, fragmenting habitat and migration corridors, and adversely affecting wildlife security, and spreading weeds. Demand for recreation opportunities on public land may be exceeding the capability of the land and resources to provide recreation in a manner that is consistent with resource and ecosystem protection.

We fully support Forest Service efforts to properly manage and control motorized activities so that they occur in a manner and location that is consistent with protection of the environment and other resources in order to sustain and protect the environment and ecosystems for use by future generations. EPA believes it is important that the preferred alternative control motor vehicle access adequately to protect water quality and fisheries habitat. It is also important

to protect wildlife habitat and security, and restore forest connectivity and reduce habitat fragmentation by motorized routes, and reduce threats of weed invasion and protect other ecologically sensitive resources, while allowing adequate access for management and recreation (i.e., off-road vehicles should be restricted to designated routes to stop cross-country travel that causes resource damages). The challenge is in providing adequate access for land management and public recreation while protecting and restoring aquatic and terrestrial ecosystems. Where there are conflicts between access and recreational use and long-term protection of resources and ecosystems, we believe resource/ecosystem protection must be given priority to sustain and protect resources and ecosystems for use by future generations.

We support the Bitterroot National Forest's effort to develop understandable travel maps (Motor Vehicle Use Maps, MVUMs), and clearer travel management rules to improve public understanding of travel rules, and thus, improve compliance with, and enforcement of, the travel plan. We do have concerns, however, that the current limited scope Travel Management Plan, that only designates routes open and closed to motorized travel, does not comprehensively address environmental effects of travel management (i.e., does not address inadequate road/trail maintenance and BMPs and resultant poor conditions of some roads/trails; does not address open roads/trails in sensitive locations and associated adverse water quality effects).

We believe there is also a need for timely efforts to address impacts of the road and trail system on streams and watersheds. Roads are often the major anthropogenic sediment source adversely affecting hydrology, water quality, and fisheries of streams. The current travel management planning process should only be a first step. Additional actions in the future are needed to more comprehensively address environmental effects of the transportation system.

Accordingly, we recommend that an Appendix be included to this Plan/EIS that identifies the potential opportunities available outside of this current travel management proposal to address road/trail related water quality and aquatic habitat impacts (e.g., improve road/trail BMPs, relocate roads, gravel roads near streams, decommission unneeded roads/trails causing resource damages, improve or remove stream crossings, etc.). We would have greater confidence in the Bitterroot National Forest's commitment to make timely road/trail system improvements if potential future actions to reduce road/trail impacts on surface waters were identified and summarized in an Appendix, along with a commitment to seek funding for implementation of needed road/trail improvements. Such Appendices were provided recently on Travel Management Plans and EIS's done on the Custer National Forest (e.g., Beartooth and Sioux Ranger Districts of Custer National Forest), and we believe should be included in the Bitterroot Travel Plan and FEIS.

The DEIS indicates that only a small percentage of roads on the District receive annual maintenance. We are concerned about the minimal funding and resources available to properly maintain roads and trails and keep them in fair to good condition to minimize erosion and water quality and fisheries impacts. There should be a continuing inspection, evaluation and maintenance program in place to identify road/trail erosion, drainage and BMP needs, and adequate funds to correct deficiencies. We encourage improved funding for road/trail maintenance, and emphasize the need for decommissioning of roads which cause resource damages and which cannot be adequately maintained. We believe road networks should be

limited to those that are necessary for access and management, and which can be adequately maintained within agency budgets and capabilities.

Also, the DEIS suggests that only minor changes to water quality would result with the implementation of any of the travel plan action alternatives, since it is reported that there are small differences in combined open road and motorized trail densities within 300 feet of streams among the action alternatives, and it is believed that open roads within 300 feet of streams (and open road crossings in particular) contribute the majority of human-related sediment in forested watersheds (Table 3.6-5 shows a combined open road and motorized trail density within 300 feet of streams ranging from only 0.11 mi/mi^2 for Alternative 4 to 0.18 mi/mi^2 for the existing condition). The DEIS further states that this situation also applies to the seventeen Clean Water Act Section 303(d)-listed streams impaired by sediment on the Bitterroot National Forest, suggesting that sediment related impairments would neither improve nor worsen significantly with any of the action alternatives.

On a very broad scale we may perhaps understand the perspective that sediment related impairments may not vary significantly among the action alternatives, however, on a site-specific basis we believe the risk of aggravating sediment impairments would be greater, for example with Alternatives 2 and 3, the no action alternative and motorized emphasis alternative, than with Alternative 4, the non-motorized emphasis alternative. We believe motorized uses in general are more likely to accelerate erosional processes and worsen poor road/trail conditions, and increase stream sedimentation and degradation of fisheries habitat when compared to non-motorized uses. Roads/trails often tend to become wider and rutted with heavy motorized use, creating a greater need for monitoring of road/trail conditions, and for road and trail maintenance for repair and erosion control. Sediment yields are generally higher from motorized routes than from non-motorized routes. We believe increased motorized uses on routes with numerous stream crossings and/or routes near streams having direct drainage to streams network can aggravate sediment transport to streams.

We believe travel management changes that will reduce motorized uses, particularly on routes near streams and in areas susceptible to erosion, are likely to reduce water quality impacts. It is not clear how many miles of motorized trails and roads may be located near the 17 Clean Water Act Section 303(d) listed streams impaired by sediment/siltation on the Forest (totaling 246.9 miles of sediment impaired waters). It also not clear whether BMPs are adequately maintained on such routes, and availability of funding to implement needed BMPs on such routes. Such information would be of interest.

We recommend that the FEIS include additional discussion of road and trail conditions proposed to be open to motorized travel near 303(d) listed streams; adequacy of road/trail maintenance and BMPs; and availability of funding to implement needed road/trail BMPs. Also, the FEIS should discuss whether there may be localized impacts to important fish habitat (e.g., spawning incubation, emergence and rearing habitat) due to motorized uses on roads/trails, particularly motorized routes with high stream crossing density or where motorized use routes may be adjacent to streams for a significant length.

We believe that any route segment with direct drainage to the stream network (and not just within 300 feet of a stream) should avoid an increase in sediment yield to a 303(d) listed

stream impaired by sediment. If motorized uses are to be allowed on routes contributing sediment to streams that are already impaired by sediment there should be "reasonable assurance" that funding will be provided to implement adequate sediment reduction BMPs on the route in the near future. Adequate road maintenance funds should be reasonably assured to implement needed BMPs and/or to maintain BMPs over the life of the travel plan. It is important that the preferred travel management alternative avoid further degradation of 303(d) listed streams.

The Travel Plan should also be consistent with Total Maximum Daily Loads (TMDLs) and Water Quality Plans that may be developed to restore water quality and beneficial use support in impaired 303(d)-listed waters in the area. The Bitterroot National Forest should coordinate their travel management planning with the Montana DEQ to assure travel plan consistency with TMDLs and water quality restoration plans being prepared by MDEQ.

We support Alternative 4, the Non-Motorized Emphasis Alternative, since Alternative 4 reduces adverse environmental impacts more than the other alternatives (e.g., Alternative 4 has lowest road and trail stream crossing density, lowest open roads and trails near streams; lowest miles of motorized routes on sensitive soils). Alternative 4 would also be the most economical alternative with a 10.3% reduction in maintenance level (ML) 2 roads and 1.2% reduction in ML3 roads (page 3.1-9). We also very much support the need to close routes that scored high for resource concerns (steep slopes, erosion, bull trout streams, sensitive plants, etc.) included in Alternative 4. We support the closure of approximately 1.1 miles of road that directly affect Upper Burnt Fork, Threemile Creek, Upper Sleeping Child Creek and an unnamed Rye Creek tributary, included with Alternatives 1 and 4; and closure of additional road segments proposed with Alternative 4 (e.g., Road #62766 in the upper Sleeping Child Creek drainage; Roadd # 5635 in the Soda Springs Creek drainage; and portions of roads #1352 and # 1358 in the Deer Creek and Daly Creek drainages).

We support inclusion of all these road closures in the preferred alternative, and also support the Alternative 4 reduction in motorized uses in wilderness study areas (WSAs) and inventoried roadless areas (IRAs). We consider Alternative 4 to be the environmentally preferred alternative. We have greater environmental concerns with Alternatives 2 and 3 due to increased adverse effects on watersheds, water quality, fisheries and wildlife habitat and security, and weed spread with these alternatives.

The EPA’s more detailed questions, comments, and concerns regarding the analysis, documentation, or potential environmental impacts of the Bitterroot Travel Management Plan DEIS are included in the enclosure with this letter. Based on the procedures EPA uses to evaluate the adequacy of the information and the potential environmental impacts of the proposed action and alternatives in an EIS, the Bitterroot Travel Management Plan DEIS has been rated as Category EC-2 (Environmental Concerns - Insufficient Information). The EPA’s environmental concerns regard potential effects to water quality, fisheries, wildlife and other resources from routes and motorized uses. A summary of EPA's DEIS rating criteria is attached.

If you have any questions you may contact Mr. Steve Potts of my staff in Helena at (406) 447-5022 or in Missoula at (406) 329-3313, or via e-mail at potts.stephen@epa.gov . Thank you for your willingness to consider our comments at this stage of the process.

Sincerely,

Julie A. DalSoglio
Acting Director
Montana Office

Enclosures

cc: Larry Svoboda/Connie Collins, EPA, 8EPR-N, Denver
Mark Kelley/Robert Ray/Dean Yashan, MDEQ, Helena

EPA Comments on the Draft EIS for the Bitterroot National Forest Travel Management Plan

Brief Project Overview:

The Bitterroot National Forest prepared a draft Travel Management Plan and associated draft EIS to analyze and address conflicts between motorized and non-motorized users, improve the quality of recreational experiences, and integrate resources considerations into the transportation system. The project area involves Bitterroot National Forest area outside of designated wilderness, consisting of 850,626 acres. Currently there are approximately 2,605 miles of roads and trails open to motorized vehicles, and 759,189 acres available for snowmobiling in the project area. Four alternatives were evaluated in detail: Alternative 1, the Proposed Action Revised; Alternative 2, No Action; Alternative 3, Motorized Emphasis; and Alternative 4, Non-motorized Emphasis.

Alternative 1, the Proposed Action Revised, includes revisions to the original proposed action made in response to public input.

Alternative 2, the No Action alternative, represents the existing condition providing a baseline against which the effects of the implementing action alternatives are compared.

Alternative 3, Motorized Emphasis, responds to concerns that motorized recreational access was being overly restricted, and that there was a need for additional motorized opportunities.

Alternative 4, Non-Motorized Emphasis, responds to concerns that additional non-motorized recreational opportunities were needed, and that motorized uses within roadless and wilderness areas may adversely affect roadless and wilderness characteristics.

A summary of the summer motorized route miles and the winter acres of areas open to snowmobiles for the four alternatives are compared in the tables below.

Route Status	**Alt. 1**	**Alt. 2**	**Alt. 3**	**Alt. 4**
Miles	**Miles**	**Miles**	**Miles**	
Roads open to all vehicles - yearlong	10	10	10	10
Roads open to highway legal vehicles - yearlong	865	887	873	840
Roads open to highway legal vehicles – seasonally	629	640	649	609
Proposed roads** open to highway legal vehicles - yearlong	0.35	0	0.35	0.35
Trails open to vehicles 50” or less in width - yearlong	39	110	63	24
Trails open to vehicles 50” or less in width - seasonally	567	550	592	411
Proposed trails*** open to vehicles 50” or less in width - seasonally	4.5	0	4.5	0
Trails open to motorcycles - yearlong	66	330	121	6
Trails open to motorcycles – seasonally	121	78	185	10

Total miles	**2,302**	**2,605**	**2,498**	**1,910**

** This is a connector between two existing roads which will require additional NEPA analysis and decision.
** These are primarily short connectors which will require additional NEPA analysis and decision.

Route Status	**Alternative 1**	**Alternative 2**	**Alternative 3**	**Alternative 4**
Acres	**Acres**	**Acres**	**Acres**	
Areas open to snowmobiles – no restrictions	569,267	710,091	621,136	501,283
Areas open to snowmobiles - seasonally	41,932	49,098	49,098	41,932
Total	**611,199**	**759,189**	**670,234**	**543,215**

A preferred alternative was not identified.

Comments:

1. Thank you for providing clear alternatives descriptions, with tables depicting summer motorized open routes as well as winter areas proposed to be open to snowmobiling for the four alternatives. The tables comparing alternatives, Tables 2-14 through 2-17, are particularly helpful in evaluating alternatives, as well as the .pdf map files showing alternatives on the CD. The alternatives descriptions and tables, summary comparison tables, and maps help clarify alternatives, define issues, and provide a basis of choice among alternatives for the decisionmaker and the public as directed by the CEQ's regulations for implementing NEPA (40 CFR 1502.14).

Alternatives

2. Forest Travel Plans are critical elements in the management of National Forests, providing direction to manage road and trail networks for public recreation and conduct of land management activities. Public recreational demand and access has increased significantly in recent years, and motorized uses and roads in many cases have caused increased damage to aquatic and terrestrial resources. We have been concerned about environmental effects of roads, trails and motorized uses, particularly increasing use of off-highway vehicles (OHVs) and all-terrain vehicles (ATVs) that occur away from roads and trails, including steep slopes, fragile soils, wet meadows, and around water bodies.

   Newer motorized vehicles such as trail bikes, ATVs, 4x4's, and snowmobiles can access areas much further into the Forest than they could historically, forcing wildlife onto smaller and smaller patches of habitat, fragmenting habitat and migration corridors, affecting wildlife behavior and life history functions and adversely affecting wildlife security and increasing wildlife mortality; and causing soil erosion and adverse effects to water quality, aquatic habitat and fisheries; increased dust emissions to air; and spreading weeds. Demand for recreation opportunities on public land may be exceeding the

capability of the land and resources to provide recreation in a manner that is consistent with resource and ecosystem protection

It is important, therefore, that Travel Plans provide adequate limitations and restrictions on motorized uses to minimize motorized travel impacts to watersheds, water quality, fisheries, soil integrity, wildlife habitat/security, spread of weeds, air quality, and overall ecosystem functions. The Bitterroot National Forest faces a great challenge in providing adequate access for land management and public recreation while protecting and restoring aquatic and terrestrial ecosystems. Where there are conflicts between access and recreational use and long-term protection of resources and ecosystems, we believe resource/ecosystem protection must be given priority to sustain and protect resources and ecosystems for use by future generations. We fully support efforts to restrict motorized vehicles to designated roads and trails, and to better address resource concerns associated with roads and trails and motorized uses.

EPA believes it is important that the preferred alternative control motor vehicle access adequately to protect water quality and fisheries habitat, as well as wildlife habitat and security and other ecologically sensitive resources. It is also important to restore forest connectivity and reduce habitat fragmentation by motorized routes while allowing adequate access for management and recreation (i.e., off-road vehicles should be restricted to designated routes to stop cross-country travel that causes resource damages). We also support reducing threats of weed invasion from motorized uses; and support education and enforcement efforts to improve public understanding of, and compliance with, and enforcement of travel management restrictions.

We support Alternative 4, the Non-Motorized Emphasis Alternative, over no action and Alternatives 1 and 3, since Alternative 4 reduces adverse environmental impacts more than the other alternatives (e.g., Alternative 4 has lowest road and trail stream crossing density, lowest open roads and trails near streams; lowest miles of motorized routes on sensitive soils, Table 2-16). Compared to no action, Alternative 4 shows 78 fewer miles of road open to motorized vehicles; a 47 mile decrease in the number of miles of roads open to highway legal vehicles-yearlong; and a 31 mile decrease in the number of miles of roads open to highway legal vehicles-seasonally; a 86 mile decrease in the number of miles of trails open -yearlong; and a 139 mile decrease in the number of miles of trails open -seasonally (page 3.1-8). Alternative 4 would also be the most economical alternative with a 10.3% reduction in maintenance level (ML) 2 roads and 1.2% reduction in ML3 roads (page 3.1-9).

We also very much support the need to consider closing routes that scored high for resource concerns (steep slopes, erosion, bull trout streams, sensitive plants, etc.) included in Alternative 4. In addition, we support the Alternative 4 reduction of motorized uses in wilderness study areas (WSAs) and inventoried roadless areas (IRAs). We are pleased that Alternatives 1 and 4 would close approximately 1.1 miles of road that directly affect Upper Burnt Fork, Threemile Creek, Upper Sleeping Child Creek and an unnamed Rye Creek tributary (page 3.6-13). Alternative 4 would also close 0.5 miles of road #62766 in the upper Sleeping Child Creek drainage; 0.10mile of road # 5635 in

the Soda Springs Creek drainage; and portions of roads #1352 and # 1358 in the Deer Creek and Daly Creek drainages, respectively. We support inclusion of these road closures in the preferred alternative.

We have greater environmental concerns with Alternatives 2 and 3 due to increased adverse effects on watersheds, water quality, fisheries and wildlife habitat and security, and weed spread associated with increased motorized uses with these alternatives. We consider Alternative 4 to be the environmentally preferred alternative.

Water Quality/Aquatic Habitat

3. The DEIS states that the Travel Planning Project will not establish a "minimum road system" and will not identify decommissioning opportunities. Unneeded roads will be identified through project level or watershed level analyses to incrementally work toward identifying a minimal road system for the Forest (page 1-9). We understand the USFS's desire to pursue travel planning on a different schedule than for establishment of a minimum road system. We agree that it is important to develop Motor Vehicle Use Maps (MVUMs) that improve management of motorized uses, particularly to halt motorized uses on undesignated routes causing resource damages. We support the effort for timely development of understandable travel maps (Motor Vehicle Use Maps, MVUMs), and clearer travel management rules to improve public understanding of travel rules, and thus, improved compliance with, and enforcement of, the travel plan.

   While we understand the need to get MVUMs out as soon as possible, we have concerns that the current limited scope Travel Management Plan only designates routes open and closed to motorized travel, and does not comprehensively address environmental effects of travel management (i.e., does not address inadequate road maintenance and BMPs and resultant poor conditions of roads; does not address roads and motorized uses in sensitive locations and associated adverse water quality effects).

   We believe there is also a need for timely efforts to address impacts of the transportation system on streams and watersheds, since roads are often the major anthropogenic sediment source adversely affecting hydrology, water quality, and fisheries of streams. The DEIS acknowledges this, since it states that "numerous studies have identified unpaved roads as a major source of sediment in streams" (page 3.6-8). The current travel management planning process should only be a first step. Additional actions in the future are needed to more comprehensively address environmental effects of the transportation system.

   We recommend that an Appendix be included to this Plan/FEIS that identifies potential opportunities that are available outside of this current travel management proposal to address road/trail related water quality and aquatic habitat impacts (e.g., improve road/trail BMPs, relocate roads, gravel roads near streams, decommission unneeded roads/trails causing resource damages, improve or remove stream crossings, etc.). We would have greater confidence in the Bitterroot National Forest's commitment to make timely road/trail system improvements if potential future actions to reduce road/trail

impacts on surface waters were identified and summarized in an Appendix, along with a commitment to seek funding for implementation of needed road/trail improvements. Such Appendices were provided recently on Travel Management Plans and DEIS's done on the Custer National Forest (e.g., Beartooth and Sioux Ranger Districts of Custer National Forest), and we believe should be included in the Bitterroot Travel Plan and FEIS.

4. Has the Bitterroot evaluated or conducted a survey of fish passage on culverts on the District? Since culverts often impede fish passage we recommend that such a survey be conducted to identify culverts causing fish passage problems. A priority list of culverts requiring modification or replacement should then be developed. Such a list could be incorporated into the Appendix recommended in the comment above to identify and summarize opportunities for road/trail improvements to address water quality/aquatic problems.

5. Comparison of Table 3.1-3 showing miles of roads on the Forest (page 3.1-4), with Table 3.1-4 showing road miles maintained during the last 3 years (page 3.1-5), evidences that the great majority of roads from maintenance level 1 through maintenance level 4 did not receive maintenance during this period. The condition of forest road/trail networks and inadequate funding for route maintenance are significant concerns of EPA. Older roads built with outdated management practices (those dating from the 1950s to the mid-1970s), poorly maintained roads, roads near streams, and roads with numerous stream crossings greatly increase the possibility of erosion and sediment transport to streams, which can impact water quality, aquatic habitat, fisheries, and channel hydrology and stability. Roads/trails often tend to become wider and rutted with heavy motorized use, creating a greater need for carrying out needed repair and erosion control where there are motorized uses. Road/trail maintenance, erosion control, and repair are intrinsically related to travel planning.

   It is known that prolonged under-funding of road maintenance on National Forests has resulted in degraded road conditions, and that there is a significant backlog of road maintenance needs on National Forests (Source: *"Rightsizing" the Forest Service Road System Part 1: Road Trend Analysis,* March 22, 2007). Improvements to forest road systems and conduct of proper road maintenance and road BMP and drainage improvements are critical to protecting aquatic health.

   We believe it is important to provide adequate funding to implement measures needed to address water quality effects of roads and trails. There should be a continuing road and trail inspection, evaluation and maintenance program in place to identify road/trail drainage and BMP needs, including an inspection, evaluation and road/trail maintenance program, and adequate funds to correct road/trail deficiencies.

   We strongly encourage the Bitterroot National Forest to improve road/trail maintenance and BMP implementation, decommission unneeded roads causing resource damages, and otherwise reduce adverse effects of the road/trail system on surface waters and watershed health on a timely basis. EPA water quality concerns are greater where routes are located

near surface waters, where there are numerous stream crossings, and where routes are in poor condition. Specific concerns include road/trail drainage and surface erosion, adequacy of waterbars, drain dips, ditch relief culverts to avoid drainage running on or along roads/trails; interception and routing of sediment to streams; unstable stream crossings and potential for washout; culvert sizing, culvert allowance of fish migration and effects on stream structure and seasonal and spawning habitats; supplies of large woody debris; open road/trail density; number of stream crossings; eliminating fords, armoring stream channels at stream crossings, graveling roads, reducing motorized uses in more erosive areas; road/trail encroachment on stream, riparian, and wetland habitats; and relocating roads/trails away from streams where possible.

As noted in comment #3 above, we recommend that an Appendix be included in the FEIS identifying potential or available opportunities to address Bitterroot NF road/trail related impacts to water quality and aquatic habitat. Such an Appendix would demonstrate that the Bitterroot NF has invested time and effort in evaluating on road/trail water quality problems, and evidence a commitment to implementing road/trail system improvements in the near future.

6. For your information, other EPA general recommendations regarding roads are to:

* minimize road construction and reduce road density as much as possible to reduce potential adverse effects to watersheds;
* locate roads away from streams and riparian areas and away from steep slopes, landslide prone areas, or erosive soils; as much as possible (roads at or near ridgetops have far fewer failures and generate far less sediment for streams than roads in lower slope positions);
* minimize the number of road stream crossings;
* stabilize cut and fill slopes;
* provide for adequate road drainage and control of surface erosion with measures such as adequate numbers of waterbars, maintaining crowns on roads, adequate numbers of rolling dips and ditch relief culverts to promote drainage off roads avoid drainage or along roads and avoid interception and routing sediment to streams;
* ditch relief culverts should not be placed where they may discharge onto erodible slopes or directly into streams.
* where possible install cross-drainage above stream crossings to prevent ditch sediments from entering streams.
* consider road effects on stream structure and seasonal and spawning habitats;
* allow for adequate large woody debris recruitment to streams and riparian buffers near streams.
* construct road stream crossings during periods of low flow to avoid fish spawning and incubation periods, and/or dewater crossing stream segment prior to construction.
* obliterate temporary roads constructed for timber sales before termination of the timber sale contract (and revegetate within ten years after the contract), and require contractors or permittees to restore natural drainage patterns (i.e., remove culverts and fill from waters of the U.S., remove cross drains and install water bars, etc.) and stabilize slopes (e.g., outsloping or contouring).

Culverts should be properly sized to handle flood events, pass bedload and woody debris, and reduce potential for washout, and should be properly aligned with the stream channel and designed and placed to allow for fish migration. Undersized culverts should be replaced and culverts which are not properly aligned or which present fish passage problems and/or serve as barriers to fish migration should be adjusted. Bridges or open bottom culverts that simulate stream grade and substrate and that provide adequate capacity for flood flows, bedload and woody debris are recommended to minimize adverse fisheries effects of road stream crossings.

Road maintenance (e.g., blading) of unpaved roads in a manner that contributes to road erosion and sediment transport to streams and wetlands should be avoided. It is important that management direction assures that road maintenance be focused on reducing road surface erosion and sediment delivery from roads to area streams. Blading should only be conducted: 1) when the road surface becomes too rough for the designated vehicle use; 2) when the surface becomes a safety hazard; or 3) when it is needed to improve road drainage by reducing road surface erosion and sediment delivery from roads to area streams. Where possible do not remove vegetation growing in ditches draining in-sloped roads. Unpaved roads should not be graded (bladed) in a manner that contributes to road erosion and sediment transport to streams and wetlands. Avoid routine general blading of ditch lines on in-sloped roads to maintain vegetative cover. Where necessary blade only the ditch segments where blockage problems occur. Graded material should not be sidecast over the shoulder, and shoulders should not be widened to encroach upon and have adverse effects upon streams, wetlands, and riparian areas adjacent to roads.

Road use during spring breakup conditions should also be avoided. Snow plowing of roads in a manner that adds sediment to streams and wetlands should be avoided. Snow plowing of roads when temperatures are above freezing should also be avoided to limit development of runoff created road ruts during thaws that increase road erosion (i.e., ruts channel road runoff along roads increasing erosion of the road surface, and sediment delivery from the road). The potential for snow plowing to cause runoff created ruts increases with snow plowing operations later in winter when there may be frequent thaws. Road maintenance staff should be aware of this concern, and limit late winter snow plowing to when it is absolutely necessary.

We are pleased that Forest Service Region 1 provides training for operators of road graders regarding conduct of road maintenance in a manner that protects streams and wetlands, (i.e., Gravel Roads Back to the Basics). If there are road maintenance needs on unpaved roads adjacent to streams and wetlands we encourage utilization of such training (contact Donna Sheehy, FS R1 Transportation Management Engineer, at 406-329-3312).

As you may know, there are also training videos available from the Forest Service San Dimas Technology and Development Center for use by the Forest Service and its contractors (e.g., “Forest Roads and the Environment”-an overview of how maintenance can affect watershed condition and fish habitat; “Reading the Traveled Way” -how road

conditions create problems and how to identify effective treatments; "Reading Beyond the Traveled Way"-explains considerations of roads vs. natural landscape functions and how to design maintenance to minimize road impacts; "Smoothing and Reshaping the Traveled Way"-step by step process for smoothing and reshaping a road while maintaining crowns and other road slopes; and "Maintaining the Ditch and Surface Cross Drains"-instructions for constructing and maintaining ditches, culverts and surface cross drains).

7. Reductions in road density also can improve watershed health. Areas with higher road density have been correlated with higher levels of stream sedimentation, and higher quality aquatic habitat and higher populations of fish are often associated with watersheds with low road density. The EPA supports road decommissioning and reductions in road density, particularly removal of road stream crossings, and closing and obliterating illegally user created non-system roads that cause resource damages. The EPA believes road and trail networks should be limited to those that can be adequately maintained within agency budgets and capabilities. We believe roads which cannot be properly maintained should be decommissioned. We support prioritizing decommissioning of roads close to streams rather than roads on upper slopes or ridges to maximize water quality improvement benefits.

   We support road rehabilitation, road closure and decommissioning, particularly removal of road stream crossings, and obliteration of illegally user created non-system roads causing resource damages. Where roads or trails are located in narrow valleys adjacent to streams where roads/trails cannot be decommissioned, we recommend consideration of use of vegetative plantings, silt fences, and/or rock or log placement along the stream banks and/or steep slopes to reduce sediment entry into the streams.

   We also want to note that it is difficult to effectively restrict motorized access and protect public lands with simple gated route closures. Route rip-seed-slash (obliteration or full route recontour) is a more effective, and thus, preferred method of closure. We advise removing and restoring stable drainage ways during route removal to address water quality concerns. It is important that adequate attention be directed to restoring natural drainages and culvert removal and revegetating natural landscapes by ripping, scarifying, and seeding disturbed areas with native seed.

8. Thank you for providing Table 3.6-2 (page 3.6-10) identifying streams listed on the 2006 Montana DEQ Clean Water Act Section 303(d) list of water quality impaired waters. This table shows that there are 17 Bitterroot National Forest streams totaling 246.9 miles impaired by sediment/siltation. We note that a 2008 303(d) list is now available (http://cwaic.mt.gov/), and suggest that the Table 3.6-2 list of impaired waters in be updated with the most recent 2008 information.

   Pending completion of a Total Maximum Daily Load (TMDL) in Montana, new and expanded nonpoint source activities may commence and continue, provided those activities are conducted in accordance with (MCA 75-5-703). The Administrative Rules of Montana (17.30.602) define these as "methods, measures, or practices that protect

present and reasonably anticipated beneficial uses." "Reasonable soil, land and water conservation practices" include but are not limited to structural and nonstructural controls and operation and maintenance procedures. Appropriate practices may be applied before, during, or after pollution producing activities.

It is important to note that "reasonable soil, land and water conservation practices" are differentiated from BMPs, which are generally established practices for controlling nonpoint source pollution. BMPs are largely practices that provide a degree of protection for water quality, but may or may not be sufficient to achieve Water Quality Standards and protect beneficial uses. "Reasonable soil, land and water conservation practices" include BMPs, but may require additional conservation practices, beyond BMPs to achieve Water Quality Standards and restore beneficial uses.

It is important that the Bitterroot Travel Management Plan be consistent with the TMDLs and Water Quality Plans that may be developed by the State of Montana to restore water quality and beneficial use support in impaired 303(d)-listed waters on the Forest. We also note that sources of pollutant loading may also occur in unlisted tributaries to listed streams, and TMDLs must account for all sources of pollution, hence there is a need to also address road/trail related pollution sources in watersheds of 303(d) listed waters.

We recommend that the Bitterroot National Forest coordinate with the Montana DEQ TMDL staff to assure consistency of the travel management with MDEQ's TMDLs and Water Quality Plans (contact Dean Yashan, Robert Ray and/or Mark Kelley of the MDEQ in Helena at 444-5317, 444-5319 and 444-3508, respectively). Proposed travel management should also be discussed with local watershed groups involved in TMDL and Water Quality Plan preparation.

9. The DEIS suggests that only minor changes to water quality would result with the implementation of any of the action alternatives (page 3.6-11). This is based on reported small differences in combined open road and motorized trail densities within 300 feet of streams among the action alternatives. It is stated that literature supports the notion that open roads within 300 feet of streams (and open road crossings in particular) contribute the majority of human-related sediment in forested watersheds.

   Table 3.6-5 (page 3.6-12) shows a combined open road and motorized trail density within 300 feet of streams ranging from only 0.11 mi/mi^2 for Alternative 4 to 0.18 mi/mi^2 for the existing condition, and thus, it is believed that all the action alternatives would have similar sediment contributions. The DEIS further states that this situation also applies to the 303(d)-listed streams on the Bitterroot National Forest (Tables 3.6-2 and 3.6.3), suggesting that sediment related impairments would neither improve nor worsen significantly with any of the action alternatives.

   On a very broad scale we may perhaps understand the perspective that sediment related impairments may not vary significantly among the action alternatives, however, on a site-specific basis we believe the risk of aggravating sediment impairments would be greater for example with Alternatives 2 and 3 than with Alternative 4. We believe motorized

uses in general are more likely to accelerate erosional processes and worsen poor road/trail conditions, and increase stream sedimentation and degradation of fisheries habitat when compared to non-motorized uses. Roads/trails often tend to become wider and rutted with heavy motorized use, creating a greater need for monitoring of road/trail conditions, and for road and trail maintenance for repair and erosion control. Sediment yields are generally higher from motorized routes than from non-motorized routes. We believe increased motorized uses on routes with numerous stream crossings and/or routes near streams having direct drainage to streams network can aggravate sediment transport to streams.

Table 3.7.-2 (page 3.7-5) shows important differences among alternatives in regard to miles of motorized trails near streams.

Table 3.7- 2: Miles of Open Motorized Trail within 100 and 300 Feet of Streams

Alternative	Miles of Open Motorized Trail within…	
	100 feet of Streams	300 feet of Streams
1	32.1	88.1
2	68.5	171.6
3	50.3	124.4
4	7.9	30.5

These differences are discounted in the DEIS, since it is stated that the majority of the motorized trails are single track motorcycle routes that have low use and are not considered significant sediment sources (page 3.7-5). However, with increasing use of ATVs we are concerned that motorized trail use may be a more significant source of sediment than suggested.

Travel management changes that will reduce motorized uses, particularly on roads and trails near streams and in areas more susceptible to erosion, are likely to reduce water quality impacts. We believe motorized uses result in higher risks of adverse water quality effects, and the differences in open motorized trails near streams between for example, Alternatives 2 and 3 in comparison to Alternative 4, can result in meaningful differences in water quality/aquatic habitat impacts.

We do not have the time and resources to visit every 303(d) listed stream impaired by sediment/siltation that may have road or trail contributions to sediment water quality impairments, and evaluate the site-specific motorized use decisions being made on each road or trail. However, if there are streams impaired by sediment where motorized uses worsen road/trail conditions and increase stream sedimentation and degradation of fisheries habitat when compared to non-motorized uses this is a concern.

This does not mean that motorized uses should not be allowed on routes contributing sediment to streams impaired by sediment. It just means that the extent to which motorized uses may aggravate stream impairments need to be considered; and that appropriate road maintenance should be conducted and sediment reduction BMPs implemented to mitigate the sediment delivery, and avoid further degradation of impaired streams. Routes in areas with severe erosion hazards and in poorly suited areas and high

hazard watersheds should be avoided.

It is not clear how many miles of motorized trails and roads may be located near the 17 Clean Water Act Section 303(d) listed streams impaired by sediment/siltation (totaling 246.9 miles of impaired waters, Table 3.6-2). It also not clear whether BMPs are adequately maintained on such routes, and/or availability of funding to implement needed BMPs on such routes. Such information would be of interest.

We recommend that the FEIS include additional discussion of road and trail conditions proposed to be open to motorized travel near 303(d) listed streams; adequacy of road/trail maintenance and BMPs; and availability of funding to implement needed road/trail BMPs. Also, the FEIS should discuss whether there may be localized impacts to important fish habitat (e.g., spawning incubation, emergence and rearing habitat) due to motorized uses on roads/trails, particularly motorized routes with high stream crossing density or where motorized use routes may be adjacent to streams for a significant length.

We believe that any route segment with direct drainage to the stream network (and not just within 300 feet of a stream) should avoid an increase in sediment yield to a 303(d) listed stream impaired by sediment. If motorized uses are to be allowed on routes contributing sediment to streams that are already impaired by sediment there should be "reasonable assurance" that funding will be provided to implement adequate sediment reduction BMPs on the route in the near future. Adequate road maintenance funds should be reasonably assured to implement needed BMPs and/or to maintain BMPs over the life of the travel plan. It is important that the preferred travel management alternative avoid further degradation of 303(d) listed streams.

10. It is stated that Alternatives 1 and 3 would propose 0.25 miles of new motorized trails within 300 feet of streams (pages 3-6-13, 3.6-15). Are any of the proposed 0.25 miles of new motorized trails within 300 feet of streams in areas where they could adversely impact water quality and fisheries? We recommend that new routes not be added to the road/trail system where the routes may have high risk of erosion and/or adverse water quality impacts. This is recommended since maintenance is already inadequate to address resource impacts from existing routes.

11. The DEIS states that the upper Burnt Fork of the Bitterroot River (Burnt Fork), is one of the Forest's most important bull trout streams, and that closing the road #312 above the Gold Creek Campground might expedite the future removal of culverts in tributaries of Burnt Fork (i.e. Arasta and Grizzly Creeks), rather than the expensive option of replacing those culverts (page 3.7-6). Closing this road would also practically eliminate the illegal firewood collection which has resulted in the loss of large streamside trees as recently as summer 2008. Two other short road segments (portions of Roads #640 and # 62765) proposed for closure in Alternatives 1 and 4 would result in fewer open roads near streams in the Threemile and upper Sleeping Child drainages, and the benefits would extend beyond the areas where the roads encroach on the stream. The closure along Threemile Creek, Road #640 is important to this small WCT-bearing stream, and this road, and dispersed camping areas accessed from it, are poorly maintained, and are used by illegal firewood cutters, unpermitted small scale mining, and OHVs.

The DEIS also states that the closure of a portion of Road #62765 upper Sleeping Child Road would result in positive benefits for fisheries in the local area. Closing a portion of Road #311 would provide partial protection for a segment of a non-fish-bearing tributary of Rye Creek. Alternative 4 also includes closure of 0.5 miles of road #62766 in the upper Sleeping Child Creek drainage; 0.10mile of road # 5635 in the Soda Springs Creek drainage; and portions of roads #1352 and # 1358 in the Deer Creek and Daly Creek drainages, respectively.

We support inclusion of these road closures in the preferred alternative, since they would reduce adverse impacts to aquatic habitat.

Wetlands

12. EPA considers the protection, improvement, and restoration of wetlands to be a high priority. Wetlands increase landscape and species diversity, and are critical to the protection of designated water uses. Possible impacts on wetlands include damage or improvement to: water quality, habitat for aquatic and terrestrial life, channel & bank stability, flood storage, ground water recharge and discharge, sources of primary production, and recreation and aesthetics. Roads and motorized uses in or near wetlands and riparian areas have potential to affect wetland integrity and function.

    Executive Order 11990 requires that all Federal Agencies protect wetlands. In addition national wetlands policy has established an interim goal of **No Overall Net Loss of the Nation's remaining wetlands**, and a long-term goal of increasing quantity and quality of the Nation's wetlands resource base. Wetland impacts should be avoided, and then minimized, to the maximum extent practicable, and then unavoidable impacts should be compensated for through wetland restoration, creation, or enhancement.

    It is important that appropriate limitations and restrictions be placed on motorized vehicle use to protect against degradation of wetlands and other sensitive areas. We did not see much discussion of travel planning impacts on wetlands, other than the brief discussion of Clean Water Act Section 404 dredge and fill permits where roads cross streams, ponds or wetlands (page 3.6-22). We believe the FEIS should include some disclosure of potential travel management impacts upon wetlands, and if any impacts occur, how they will be mitigated (i.e., mitigation means sequence of avoidance, minimization, rehabilitation, and compensation for unavoidable impacts). If no wetland impacts are expected that should simply be stated.

Recreation

13. We appreciate the discussion of recreation and trails in the DEIS (beginning on page 3.2-1), including the table of Recreation Opportunity Spectrum (ROS) setting by miles of motorized route alternative (Tables 3.2-6, page 3.2-23). While we recognize that a balance of motorized and non-motorized recreational opportunities need to be provided, as noted earlier we have concerns that motorized uses contribute more to resource and

environmental damage than non-motorized uses. Motorized uses push wildlife onto smaller and smaller patches of habitat; reducing migration corridors; increasing adverse effects to wildlife habitat and security; causing soil erosion and adverse effects to water quality and aquatic habitat and fisheries; spreading weeds; and increasing opportunity for vandalism of historic properties.

Motorized uses also have the potential to degrade the quality of experience and solitude desired by non-motorized uses (e.g., hiking, viewing natural features and wildlife). It appears that the no action alternative (Alternative 2) and the motorized emphasis alternative (Alternative 3) provide the greatest opportunities for motorized recreation, and least opportunities for non-motorized recreation without effects of motorized uses. We support increasing opportunities for non-motorized uses such as viewing wildlife or natural features in solitude, as well as reducing environmental and resource impacts.

We believe motorized activities should only occur in a manner and location that minimize effects to other public uses, and are consistent with protection of natural features, wildlife, and other resources. We support Alternative 4 that provides greater limitations on motorized uses to allow greater levels of protection for wildlife, natural features, and other resources that are used by the public.

14. We support use of either or both of the distance limitations on motorized travel to dispersed camping sites proposed with Alternative 4 (150 feet) and/or Alternative 1 (300 feet), depending on which limitation may be needed at a particular campsite to protect important or ecologically sensitive resources (e.g., water quality, aquatic habitat, riparian vegetation, rare and sensitive plants, etc.). The DEIS states that many of the dispersed sites accessed by vehicles are along fish-bearing streams (page 3.7-3), and in areas where there are good fish habitat (i.e., in lower gradient areas with more large pools and meandering channels). It is also stated that ATV and OHV use is common at dispersed campsites (page 3.2-7).

    It is important to avoid motorized uses in dispersed camping sites where such uses would adversely affect important or ecologically sensitive resources. In some cases that may mean using the 150 foot limitation on motorized travel to dispersed camping sites, yet in other situations a 300 foot limitation may allow adequate protection. We do not oppose a 300 foot limitation on motorized travel to dispersed camping sites if such travel can be carried out without adverse effects to important or ecologically sensitive resources.

    EPA encourages locating campground facilities, and concentrated public recreational uses away from important or ecologically sensitive resources. We believe motorized access to camping sites in sensitive areas should be adequately restricted based on what is needed to assure that motorized access does not damage important or ecologically sensitive resources. It would be helpful and appropriate to identify and designate camping sites that avoid sensitive areas, and/or to encourage camping or concentrated public use in areas that are more resilient and can more easily recover from impacts and/or accommodate public use with fewer impacts.

We suggest that the Bitterroot NF identify specific dispersed camping sites where either the 150 foot or 300 foot motorized travel limitation should be used, based on adequacy of the limitation to avoid damage to important or ecologically sensitive resources during motorized travel at campsites. We also support the 30 foot no drive zone adjacent to streams, ponds, lakes, marshes or wet areas proposed with Alternatives 1 and 4.

Law Enforcement

15. Executive Orders 11644 and 11989, "Use of Off-Road Vehicles on Public Lands," require agencies to ensure that the use of off-road vehicles on public lands will be controlled and directed so as to protect the resources of those lands, to promote the safety of all users of those lands, and to minimize conflicts among the various uses of those lands. We appreciate the discussion of law enforcement in the Travel Plan/DEIS (pages 3.2-18 to 3.2-20). Policing and enforcement are necessary to promote improved compliance, and better ensure protection of water quality, fisheries, wildlife, and other sensitive resources. Illegal motorized uses of trails closed to motorized uses on the Bitterroot NF are noted in the DEIS (e.g., Trail 313, page 3.2-13).

    We have concerns regarding the adequacy of resources to enforce travel restrictions necessary for protection of sensitive resources and the environment. The DEIS states that there are only two full time law enforcement officers stationed on the Bitterroot NF and one OHV Ranger, as well as staff trained as Forest Protection Officers, who can write citations for travel management violations, but otherwise have limited law enforcement authority and responsibilities.

    We support adding law enforcement personnel to handle the increases in motor vehicle uses that are occurring on the Forest. We particularly recommend increasing enforcement officer contact with off-road vehicle users and those violating motorized access restrictions on closed roads and trails; and increasing enforcement staffing on holidays and weekends, when much illegal motor vehicle use occurs.

Wilderness/Wilderness Study Areas/Roadless Areas

16. Wilderness study areas and roadless areas often provide population strongholds and key refugia for listed or proposed species and narrow endemic populations due to their more natural undisturbed character. There are two wilderness study areas and eleven inventoried roadless areas that may have potential for future wilderness designation in the analysis area (pages 3.3-4, 3.3-6). The Bitterroot Forest Plan recommends additions to the Selway Bitterroot Wilderness Area (48,305 acres) and the Blue Joint Wilderness Study Area (28,500 acres, page 3.3-3). Table 3.3-3 (page 3.3-21) summarizes miles of motorized routes in wilderness study areas and inventoried roadless areas.

Table 3.3- 3: Summary of Miles of Motorized Routes by Alternative

Alt. 1	Alt. 2	Alt. 3	Alt. 4
Miles Open Roads in IRAs	6.1	6.2	6.2	6.1
Miles Motorized Trails In IRAs	111.6	222.2	188.6	2.2

Miles Open Roads in Sapphire WSA	0.3	0.3	0.3	0.3
Miles Motorized Trails in Sapphire WSA	0.0	30.5	21.7	0.0
Miles Open Roads in Blue Joint WSA	1.2	4.5	4.5	0.9
Miles Motorized Trails in Blue Joint WSA	37.4	61.9	41.7	0.2

We have concerns about allowing motorized recreation within wilderness study areas, and inventoried roadless areas, since such uses may have potential adverse effects on wilderness and roadless values, especially in recognition of trends of increasing public use of OHV's and ATVs that can access previously inaccessible lands and cause resource damages.

EPA supports protection of the pristine character and integrity of remaining minimally disturbed wilderness study areas and roadless areas to prevent further fragmentation and degradation of wildlife habitat, and to maintain or restore solitude and primitive recreation characteristics in such areas. We encourage the Bitterroot NF to restrict motorized use in remaining wilderness study areas and roadless areas to protect the pristine characteristics of such areas. Motorized routes created by cross-country travel in such areas should be obliterated and revegetated, with closures policed and enforced.

One of the National Strategic Goals regarding the use of motorized equipment in wilderness (FSM 2326.02) is to "Exclude the sight, sound, and other tangible evidence of motorized equipment or mechanical transport within wilderness, except where they are needed and justified." It is not clear whether this goal would be met in the Sapphire and Blue Joint Wilderness Study Areas. Site visits to areas with motorized recreational use adjacent to these areas may be required to confirm whether sight, sound or odor from motorized use are tangible from within the wilderness boundary. If there are likely impacts, the Forest should indicate whether motorized use that causes the impact is "needed and justified." It is important that our last remaining wildlands remain unspoiled and natural in order to provide clean water and air, sanctuary for native wildlife and plant species, and opportunities for low impact human recreation. We very much support the recommendation of Wilderness designation for the Sapphire and Blue Joint areas.

EPA supports Alternative 4 in regard to responsiveness to maintenance of wilderness and roadless character. We would be concerned about selection of Alternative 2 or 3 which are least responsive to protection and maintenance of wilderness and roadless character.

Monitoring

There should be an effective program for monitoring, evaluation and adaptive management to assure that effects of travel management are identified and management modified where necessary to reduce adverse effects. As stated numerous times, we are concerned about effects of roads/trails and motorized uses on water quality, aquatic habitat and fisheries, as well as other resources such as wildlife habitat, sensitive plants. Given the acknowledged impact of roads/trails and motorized uses use on water quality and fisheries and other resources such as wildlife, sensitive plants, etc., it is important to monitor effects of travel and public recreation on these resources.

Effects of travel need to be identified through monitoring, so that they can be mitigated. It is through the iterative process of setting goals and objectives, planning and carrying out travel management, monitoring impacts of travel management, and feeding back monitoring results to managers so they can understand effects and make needed adjustments to mitigate effects, that adaptive management works.

The DEIS states (page 2-14) that implementation monitoring is a standard operating procedure to catch and assess problems before or when they occur so corrective measures can be taken. By its nature, implementation monitoring requires an adaptive approach to management, which means when undesirable or unexpected results or conditions are identified through monitoring, the project will be assessed and altered as needed to meet the intent of the mitigation.

We recommend that the FEIS provide additional disclosure in regard to potential outcomes related to monitoring of travel management. For example, stating that roads or trails will be closed if monitoring shows that motor vehicle use is causing or will cause considerable adverse effects on public safety or water quality, fish habitat, soil, vegetation, wildlife, wildlife habitat, or cultural or historic resources.

We also recommend that mechanisms for public disclosure of the monitoring analysis and the decisions for the Travel Plan be provided. The roles of the Forest Service, other Agencies, independent science, and the public in monitoring should be identified. The FEIS should discuss the future decision points in the adaptive management process that may require additional NEPA analysis. The FEIS should also discuss resources and funding availability for monitoring and adaptive management in regard to effects of travel. We are concerned about adequacy of resources for monitoring, since monitoring is often inadequately funded.

Noxious Weeds

17. We are pleased that the DEIS includes discussion of travel management impacts on the spread of noxious weeds (beginning on page 3.10-1). Noxious weeds are a great threat to biodiversity. Weeds can out-compete native plants and produce a monoculture that has little or no plant species diversity or benefit to wildlife. Noxious weeds tend to gain a foothold where there is disturbance in the ecosystem, such as road/trail construction and where off-road vehicles disturb soils.

    EPA supports the need to minimize noxious weed infestation. We believe motorized uses contributes to the spread of weeds. This is borne out by the statement in the DEIS (page 3.10-2), stating that noxious weeds are more common along routes open to motorized vehicles than in other part of the Bitterroot NF. In fact, we believe motorized vehicles—cars, trucks, ATVs, motorcycles, and even snowmobiles- may be the greatest vector for spread of weeds. A single vehicle driven several feet through a knapweed site can acquire up to 2,000 seeds, 200 of which may still be attached after 10 miles of driving (Montana Knapweeds: Identification, Biology and Management, MSU Extension

Service.)

We believe an effective noxious weed control program should include restrictions on motorized uses, particularly off-road uses. Off-road vehicles are designed to, and do, travel off-trail, disturbing soil, creating weed seedbeds, and dispersing seeds widely. Weed seed dispersal from non-motorized travel is of lesser concern because of fewer places to collect/transport seed, and the dispersal rate and distances along trails are less with non-motorized travel. Table 2-16 comparing alternatives (page 2-27) evidences that Alternative 4 has the lowest risk of weed invasion. We support limitations of motorized uses to reduce threat of weed spread.

For your information, measures we often recommend for preventing spread from source areas to uninfested areas include:

- Ensure that equipment tracks and tires are cleaned prior to transportation to an uninfested site.
- Focus control efforts at trail heads and transportation corridors to prevent tracking of seed into uninfested areas.
- Attempt to control the spread from one watershed to another to reduce water as a transport vector.
- If a localized infestation exists and control is not a viable option, consider rerouting trails/roads around the infestation to reduce available vectors for spread.
- Establish an education program for industrial and recreational users and encourage voluntary assistance in both prevention and control activities.
- Reseed disturbed sites as soon as possible following disturbance.

Wildlife

18. We believe the Travel Plan should avoid adverse impacts upon species of special concern, and contribute to recovery of listed species, and should maintain and protect high quality wildlife habitat and linkage corridors for productive and diverse populations of wildlife species (species viability). Wildlife connectivity and security should be maintained or improved and wildlife fragmentation and displacement should be reduced.

    It is known that motorized use increases wildlife encounters with humans which can result in habitat degradation, displacement, increased wildlife mortality, changes in behavior, increased stress, and reduction of reproductive success. We support adequate limitations on motorized travel and open motorized road and trail density for protection of wildlife habitat and security, and key corridors for wildlife migration.

    We are pleased that the DEIS states that the preferred alternative will have “no effect” on the threatened Canada lynx (page 3.5-12). We are also pleased that the preferred alternative would have “no impact” on sensitive species (gray wolves, wolverine), and while alternatives “may impact” some sensitive species they would not likely contribute towards a Federal listing or loss of viability to population or species (bald eagle).

EPA recommends that the final EIS and Record of Decision include documentation of U.S. Fish & Wildlife Service concurrence with the biological assessment upon listed species. If the consultation process is treated as a separate process, the Agencies risk USFWS identification of significant impacts, perhaps additional mitigation measures, or changes to the preferred alternative.

Snowmobiles

19. Snowmobile noise can have adverse effects upon wildlife and solitude characteristics, and snowmobile air pollutant emissions can be an environmental concern. Much information is available regarding snowmobile noise and pollutant emissions and environmental effects. Many snowmobiles (and ATV's) used in mountain environments utilize 2-stroke engines, which mix the lubricating oil with the fuel and both are expelled in the exhaust. These engines allow up to one third of the fuel/oil mixture delivered to the engine to be passed into the environment virtually unburned. As stated in the U.S. Department of the Interior document, "Air Quality Concerns Related to Snowmobile Usage in National Parks", Feb. 2000, hydrocarbon emission rates from 2-stroke snowmobile engines are about 80 times greater that those found in a 1995-96 automobile engines. A majority of these hydrocarbons are aromatic hydrocarbons, including polyaromatic hydrocarbons, which are considered to be the most toxic component of petroleum products, and aromatic hydrocarbons are also associated with chronic and carcinogenic effects.

    Increased snowmobile pollutant emissions could be particularly problematic in areas where snowmobiles congregate (e.g., trailheads) and during short periods of poor air dispersion (e.g., valleys where frequent inversion conditions may trap air pollutants). Some visitors and employees at Yellowstone National Park have experienced health effects from over-snow vehicle emissions even though Ambient Air Quality Standards have not been exceeded. In general, snowmobile emissions are worst when the engine is first started and hasn't yet warmed. For this reason trailheads are areas where this concern is greatest. If there are heavily used trailheads with large numbers of snowmobiles where stable air is present, the Forest should consider placing signs or implementing patrols on heavy use mornings to encourage users to limit idling time.

    The actual and potential environmental and human health effects from snowmobile emissions of noise, hydrocarbons and carbon monoxide are probably best summarized in the Park Service's recent Final EIS for winter use management in Yellowstone and Grand Teton National Parks. Snowmobile best available technology is shown on a Yellowstone National Park website, http://www.nps.gov/yell/parkmgmt/current_batlist.htm . EPA recommends that the Bitterroot National Forest promote use of snowmobile best available technology for snowmobile use on the Bitterroot National Forest.

20. Also, some Forests have policies that prohibit off-trail snowmobile use until at least 6 inches of snow has accumulated. Snow in alpine areas is highly susceptible to wind movement which can leave bare or thinly covered areas that would be difficult or impossible to avoid given the speed of snowmobiles. Fragile alpine vegetation may need

protection against such use, since impacts to some fragile alpine areas for all practical purposes may be irreversible. The DEIS indicates that snowmobile cannot begin until December 1, except on open roads to support hunting season road closures. We did not see any limitations on when snowmobiling season would end on the Bitterroot Forest. We encourage consideration of a limitation on snowmobile use during late springtime since snowmobile use on marginally snow covered areas may damage fragile alpine vegetation. Plant communities, biodiversity and water quality in higher elevation shallow-soil ecosystems may be extremely vulnerable to soil or vegetation disturbance. The impact of a road cut, a pioneered trail or other disturbance, can extend well downslope of the disturbed area, and adversely affect plant communities, biodiversity and water quality. Are any measures proposed to protect fragile alpine vegetation from off-trail snowmobile use?